



501.35286C14

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): C. MIYAZAKI et al  
Serial No.: 10/058,319  
Filed: January 30, 2002  
For: SEMICONDUCTOR DEVICE AND MANUFACTURING  
METHOD THEREOF  
Group: 2827  
Examiner: L. THAI

**AMENDMENT**

Assistant Commissioner of Patents  
Washington, D. C. 20231

November 25, 2002

Sir:

In response to the Office Action dated August 27, 2002, the following amendment and remarks are respectfully submitted in connection with the above-identified application.

**IN THE CLAIMS:**

Please **cancel** claims 1-13 and 15-17 without prejudice or disclaimer of the subject matter therein.

Please **amend** claims 14 and 18, as follows:

14. **(Amended)** A method of manufacturing a semiconductor device comprising the steps of:

(a) providing a semiconductor chip having a plurality of semiconductor elements and a plurality of external terminals formed on a main surface thereof;

(b) providing a wiring substrate having a plurality of wirings and an opening, the wirings are revealed on a main surface of the wiring substrate and a layer having adhesion is applied on a rear surface of the wiring substrate, opposite of the main surface thereof,

wherein the step (b) comprises a step of forming the layer on the rear surface of the wiring substrate by printing;

(c) adhering the main surface of the semiconductor chip on the rear surface of the wiring substrate by way of the layer as the layer is protruding from an outer periphery of the semiconductor chip;

(d) electrically connecting the plurality of wirings with the plurality of external terminals through the opening, respectively, and

(e) after the step (d), cutting the wiring substrate together with the layer to form outer peripheries thereof outside of the outer periphery of the semiconductor chip.

**18. (Amended)** A method of manufacturing a semiconductor device comprising the steps of:

(a) providing a semiconductor chip having a plurality of semiconductor elements and a plurality of external terminals formed on a main surface thereof;

(b) providing a wiring substrate, comprised of a polyimide tape, having a plurality of wirings and an opening, the wirings are revealed on a main surface of the wiring substrate and a layer having adhesion and a thickness larger than that of the wiring substrate is applied on a rear surface of the wiring substrate, opposite of the main surface thereof;

wherein the step (b) comprises a step of forming the layer on the rear surface of the wiring substrate by printing,

(c) adhering the main surface of the semiconductor chip on the rear surface of the wiring substrate by way of the layer as the layer is protruding from an outer periphery of the semiconductor chip;

(d) electrically connecting the plurality of wirings with the plurality of external terminals through the opening, respectively, and

(e) after the step (d), cutting the wiring substrate together with the layer to form outer peripheries thereof outside of the outer periphery of the semiconductor chip,

wherein the wiring substrate and the layer are cut along a same cutting line.

### Remarks

This is a reply to the outstanding first Office Action, dated August 27, 2002, for the purpose of placing the above-identified application in condition for formal allowability.

At the outset, appreciation is expressed to the Examiner for the indication that the subject matter of claims 14 and 18-20 are considered allowable and that those claims would be formally allowed upon being re-presented in an appropriate self-contained format. Accordingly, the subject matter of base claim 8 (now canceled) has been incorporated into that of dependent claim 14 thereby making the latter an independent claim in condition for formal allowability. Correspondingly, dependent claims 18-20 were also re-represented in a self-contained format. Namely, the subject matter of base claim 8 as well as that of intervening claims 15-17 were incorporated into that of dependent claim 18, thereby making the latter an independent claim in condition for formal allowability. Dependent claims 19 and 20, it is submitted, are now also allowable since they are now directly dependent on the now independent claim 18.

By the present response, applicants have decided, at the present time, to cancel all of the rejected claims and to re-present all of the objected claims, which were deemed as being otherwise allowable, in an independent claimed format. With the canceling of all of the rejected claims, the previously standing art rejections directed thereto, under 35 USC §103(a), were rendered moot. It is submitted, agreeing to the canceling of all of the rejected claims should not be construed as an acquiescence with regard to the merits of the previously standing art rejections. Rather, this amendment, in its present form, was filed in consideration of applicants receiving an early formal notification of allowability.

Therefore, having obviated all of the outstanding issues, formal entry of this

Amendment as well as an early formal notification of allowability of the above-identified application is respectfully requested.

**A marked-up copy showing changes made is enclosed.**

To the extent necessary, applicants petition for an extension of time under 37 CFR §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, to the Deposit Account of Antonelli, Terry, Stout & Kraus, LLP, Dep. Acct. No. 01-2135 (501.35286C14), and please credit any excess fees to such deposit account.

Respectfully submitted,  
**ANTONELLI, TERRY, STOUT & KRAUS, LLP**

  
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